

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of forming a lateral power semiconductor device having an active region that includes a drift region, the method comprising ~~the steps~~ of:

forming, in a layer provided on a semiconductor substrate, a power semiconductor device having an active region that includes a drift region; ~~and~~

removing at least a portion of the semiconductor substrate below at least a portion of the drift region such that said at least a portion of the drift region is provided in a membrane defined by that portion of the layer below which the semiconductor substrate has been removed; and

providing electrical contacts on only one surface of the power semiconductor device.

2. (Original) A method according to claim 1, wherein said at least a portion of the semiconductor substrate is removed by wet etching.

3. (Original) A method according to claim 1, wherein said at least a portion of the semiconductor substrate is removed by dry etching.

4. (Original) A method according to claim 2, wherein said at least a portion of the semiconductor substrate is removed using a buried insulating layer as an etch stop.

5. (Cancelled)

6. (Cancelled)

7. (Currently Amended) A method according to claim 1, comprising ~~the step of~~ applying an electrically insulating and thermally conductive layer adjacent the bottom surface of the membrane.

8. (Original) A method according to claim 7, wherein the electrically insulating and thermally conductive layer is applied by a deposition process.